

REMARKS

Applicant's counsel thanks the Examiner for the careful consideration given the application.

Claims

Claim 1 and its dependent claims 4 and 6-19 have been amended to clarify the invention. Amended claim 1 is directed to a system for door access control and key management, which includes: (1) a door administering system for administering access to one or more doors; (2) a key administering system for administering one or more keys separately from the administration of the access of the door; and (3) a door control/lock assembly mounted on each door. The door administering system includes: (a) a module for managing access privilege of one or more individuals for each door and assigning access authorization to each individual for the door, (b) a door database for storing a door identification uniquely assigned to each door and information on each authorized individual for each door, and (c) a module for changing data stored in the door database. The key administering system includes: (d) a key database for storing one or more keys for each key owner, and (e) a module for changing data stored in the key database.

Claims 2-3 have been canceled without prejudice.

Claims 20 and 25 have been amended to add changes corresponding to claim 1.

Claims 23-24 have been amended to correct grammatical errors.

The amendment to the claims is fully supported by the application as originally filed. In particular, support for the amendment to claims 1, 20 and 25, can be found, for example, on page 8, line 9- page 10, line 9, page 10, line 18-page 11, line 2, page 13, lines 1-11 and 28-30, page 16, line 21- page 17, line 2, and in Figures 1 and 3. No new matter has been introduced by way of the amendment.

Claims 28-47 have been added. New claims 28-45 depend on claim 1. New claim 46 depends on claim 20. New claim 47 depends on claim 25.

New claims 28-47 are fully supported by the application as originally filed. In particular, support for new claim 28 can be found, for example, on page 16, lines 4-8; support for new claims 29-31 can be found, for example, on page 8, lines 9-17, page 9, lines 7-15, page 10, lines 10-12, and page 16, lines 4-8; support for new claim 32 can be found, for example, on page 5, lines 21-23; support for new claim 33 can be found, for example, on the step (c) of original claim 20; support for new claim 34 can be found, for example, on the step (d) of original claim 20; support for new claims 35-36 can be found, on page 8, lines 18-24; support for new claims 37-38 can be found, for example, on page 8, lines 25-29; support for new claim 39 can be found, for example, on page 10, lines 1-6; support for new claim 40 can be found, for example, on page 10, lines 10-12; support for new claims 41-42 can be found, for example, on page 10, lines 15-17; support for new claim 43 can be found, for example, on page 10, lines 25-28; support for new claim 44 can be found, for example, on page 8, lines 15-17, page 9, lines 7-15, and page 10, lines 18-29; support for new claim 45 can be found, for example, on page 12, lines 1-7; support for new claim 46 can be found, for example, on the step (c) of original claim 20; support for new claim 47 can be found, for example, on page 14, lines 15-17. No new matter has been introduced by way of the amendment.

The corresponding Canadian patent application No. 2,360,120 has been allowed. It is respectfully submitted that independent claims 1, 20, and 25 are substantially the same as the allowed independent claims in the corresponding Canadian patent application.

Applicant respectfully requests the Examiner to enter the above amendment to the claims.

Specification

The "Background of the Invention" section has been amended to clarify the description of page 2, lines 14-16.

The "Summary of the Invention" section has been amended to add changes corresponding to those of claims 1, 20, and 25.

The "Brief Description of the Drawings" section has been amended to recite "a door administering system and a key administering system" as shown in Figure 1.

The term “door lock/control assembly” in the specification has been replaced with “door control/lock assembly”. The term “door control/lock assembly” can be found, for example, on page 5, lines 14-15 of the original description.

The description of pages 5, 10-11, 13-14, and 16-17 has been amended to clarify door and key administration. Support for “door administrator” in the amended paragraphs can be found on page 8, lines 9-17 of the original application. Support for “key administrator” in the amended paragraphs can be found on page 10, lines 10-12 of the original application. Further, the description of page 16, lines 4-8 states that a key owner has his own key server database, which implies that the key owner may administer his own key database as a key administrator. Thus, Applicant believes that the amendment to the description of pages 5, 10-11, 13-14, and 16-17 are fully supported by the application as originally filed.

The description of page 13 has been amended to add the term “network address” as an example of the “location” of a Meta server. As stated at page 13, lines 18-20, each door access control and key management system communicates with a Meta server via a communications network. Thus, Applicant believes that the term “network address” is reasonably inferred from the application as originally filed.

Typographical errors on pages 6-7 and 12 have been corrected.

The amendment to the specification is fully supported by the application as originally filed. No new matter has been introduced by way of the amendment.

Claim rejections

The Examiner rejected original claims 1-5, 8, 10, 13, 15-18, 20, and 24-25 under 35 U.S.C. 102(e) as being anticipated by Martin et al. (US 5,979,754), hereinafter referred to as Martin. The Examiner rejected original claim 9 under 35 U.S.C. 103(a) as being unpatentable over Martin in view of Flick (US 6,130,606). The Examiner rejected original claim 9 under 35 U.S.C. 103(a) as being unpatentable over Martin in view of Flick (US 6,130,606). The Examiner rejected original claim 14 under 35 U.S.C. 103(a) as being unpatentable over Martin in view of Dunhame et al. (US 5,541,585), hereinafter referred to as Dunhame. The Examiner rejected original claims 11-12 and 21-22 under 35 U.S.C. 103(a) as being unpatentable over Martin in view of Yulkowski (US 6,049,287). The Examiner

rejected original claims 6-7, 19, 23, 26, and 26 under 35 U.S.C. 103(a) as being unpatentable over Martin in view of Kalajan(US 6,006,258).

Independent claims 1, 20 and 25 have been amended to clarify the invention.

Claim 1 is directed to a system for door access control and key management, which includes a door administering system for administering each door, a key administering system for administering each key separately from the administration of the access to each door, and a door control/lock assembly. The door administering system includes: a module for managing access privilege of one or more individuals for each door and assigning access authorization to each individual for the door; a door database for storing a door identification uniquely assigned to each door and information on one or more authorized individuals for each door; and a module for changing data stored in the door database. The key administering system includes: a key database for storing one or more keys for each key owner; and a module for changing data stored in the key database. The door control/lock assembly communicates with the door administering system and the key administering system, and is provided for identifying a user key and operating the door based on the door administration and the key administration.

Claim 20 is a method claim corresponding to system claim 1.

Claim 30 is directed to a system architecture having a door control and key management system defined in claim 1, and a Meta server.

According to the present invention, the administrative functions of key administration and door administration are separated from each other. The door control/lock assembly operates a door in cooperation with the key administering system and the door administering system. A key owner, who has a key administered by the key administering system, can gain access to a door under the administration provided by the door administering system.

Separating the administrative functions of key administration and door administration from each other ensures that each function can be administered by different individuals who do not necessarily have access to the other administrative function. This allows key information in the key administering system to be changed without access to information in the door administering system. Similarly, this

allows a new key to be registered with the key administering system without access to the information in the door administering system.

Accordingly, the registered key can be quickly and easily updated (replaced or cancelled), and a new key can be quickly and easily stored in the key administering system.

For example, an individual may administer his or her own key using his or her own key administering system, while owners of premises may administer their doors using their own door administration system (e.g., page 10, line 17-page 12, line 2). In such a circumstance the door administration system can manage access privilege of each individual without having their key information.

Martin discloses a door lock control system having a registration system 20, a computer 40, a guest room card reader 55, and a room door lock release apparatus 60 (Figures 2-4). A user pre-registers his credit card through the registration system 20, and obtains registration data, i.e., room number. The card reader 55 is positioned adjacent to each guest room door (col. 6, lines 65-66), and reads a credit card information presented by the user. The computer 40 actuates the room door lock release apparatus 60 of the associated guest room when the computer recognizes that the proper credit card has been inserted into the associated room card reader 55 (col. 7, lines 30-33).

Martin assigns access authorization to a credit card for a room/door. Martin establishes one to one relationship between the credit card and the room, and administers the credit number and its associated room/door together. Thus, Martin cannot manage access privilege of an individual for each door without a credit card information.

Martin further discloses a control system 404 with software program 406 which includes identification of users authorized to enter the rooms and doors of a facility, and the specific identity of such rooms and doors (col. 13, lines 22-33). A main paging transmitter 412 connected to the control system 404 transmits entry card identity information and other information to local paging units 416 (col.48-64). A controller 418 generate a lock actuation signal when it determines that an entry card 408 being read by a card reader 410 matches an approved card whose data has been received by the local paging receiver. However, Martin neither suggests

nor teaches that software 406 implements key administration separately from door administration.

In Martin, a user authorized to enter a room cannot change his credit card (i.e. pre-registered key) to a different credit card (i.e. new key) and use that new credit card to effect entry into the authorized room. However, in accordance with the present invention, a user, who may be a key administrator, can change keys, by entering a new key code from a browser, and then use the new key to unlock a lock where the user has been authorized to enter.

The dependent claims recite additional features which are not disclosed or suggested by Martin.

Claim 4 has been amended to recite that the door control/lock assembly carries out the authorization process (of claim 1) when the communication between the door control/lock assembly and the door and key administering systems is interrupted.

With respect to original claim 4, the Examiner stated that Martin discloses that the door control/lock assembly carries out the authorization process when the communication between the door assembly and the door/key administering system is interrupted. The Examiner also stated "guest room card reader" (55) of Martin is equal to the "door control/lock assembly", and "the computer" (40) of Martin is equal to "door/key administering system."

Applicant disagrees with the Examiner. It is respectfully submitted that the guest room card reader 55 of Martin is merely capable of reading a credit card. There is no disclosure or suggestion that the guest room card reader 55 assigns access authorization to each individual for the door. When the communication between the guest room card reader 55 and the computer 40 is interrupted, Martin's system cannot work.

Claim 15 recites that the embedded controller includes a database for storing information on the keys and users such that, when the communication between the door control/lock assembly and the door and key administering systems is interrupted, the door control/lock assembly can carry out the authorization process for the door associated therewith. Claim 15 depends on claim 1 via claim 10. Thus, according to claim 15, the embedded controller of the door control/lock assembly

mounted on the door includes a database for storing information on the keys and users.

With respect to original claim 15, the Examiner stated that “computer” of Martin is equivalent to “database” (included in the door/control assembly mounted on each door).

Applicant disagrees with the Examiner. Martin merely discloses a central computer. There is no disclosure or suggestion that Martin has a database for a door/control assembly mounted on each door, which stores information on the keys and users.

With respect to original claim 18, the Examiner stated that the computer of Martin removes (updates) the credit card identity information from the memory, and the card ceases to function as a guest room key, thus this process is shared functionality with the limitation “the stored data pertaining to the keys and the doors can be updated when required” (of original claim 18).

As recited in claim 1, the administration of keys is implemented separately from the administration of access to each door. Thus, according to the present invention, the stored data pertaining to the keys (or the doors) can be updated separately from the update of the stored data pertaining to the doors (or the keys) when required. Martin fails to disclose or suggest this feature.

With respect to original claim 25, the Examiner stated that “the computer” of Martin is equivalent to “Meta server” of claim 25, which stores the identity of all doors and rooms requiring control in a given facility, and identification of all individuals authorized to have entry to all or specific rooms of the facility.

It is respectfully submitted that a Meta server of claim 25 is provided for serving as an address reference among the door administering systems and the key administering systems. Door information is stored in the door database of the door administering system, and key information is stored in the key database of the key administering system. Martin fails to suggest or teach that the computer serves as an address reference among door administering systems and key administering systems, where each key administering system administers keys separately from door administration.

The other cited references also fail to suggest or teach the subject matters defined by the claims.

With respect to claim 9, the Examiner stated that Flick discloses encrypted signals (Abstract, col. 1, lines 64-67, col. 2, lines 1-7).

Flick merely discloses encryption. Flick discloses a vehicle security system including a controller having a remote transmitter verification means for generating a signal based upon a number of coded remote transmitters 50 capable of switching the controller from the armed mode to the disarmed mode (col. 5, lines 4-8). Flick's system is irrelevant to the present invention.

With respect to claim 14, the Examiner stated that Dunhame discloses a security system for controlling building access that includes door open sensor, speaker and microphone, "dim light" which is equivalent to "activity light" and camera (col. 5, lines 14-48, col. 6, line 51, col. 7, lines 28-29).

Dunhame discloses a security system having a dim light 22. The dim light 22 is mounted to door frame 12 and provides a low level of light to the door opening (col. 5, lines 16-17).

It is respectfully submitted that an activity light is an LED (light-emitting diode) that shines when a piece of hardware is working, communicating with the network, and transmitting data (www.watchguard.com/glossary/a.asp). The activity light of claim 14 is different from the dim light 22 of Dunhame.

With respect to claims 11-12, and 21-22, the Examiner stated Yulkowski discloses a door system with electrical components associated therewith for sensing and reacting to emergency conditions. The Examiner further stated that an access control device (66) of Yulkowski has a key pad and card reader (68, 70), which is equivalent to identification devices of claims 11-12.

The key pad 68 of Yulkowski allows the input of an identification code to the controller 66 to allow the door to unlock or lock. The card reader 70 of Yulkowski may be used to insert or slide a card therethrough to unlock or lock the door (col. 4, lines 66-64). Yulkowski merely discloses that a card and an identification code are required to gain access within an opening (col. 4, lines 65-67). The key pad and card reader of Yulkowski does not communicate with a door administering system and a key administering system.

With respect to claims 6-7, 19, 23, and 26-27, the Examiner stated that Kalajan discloses protocols.

Kalajan is directed to a method and system for delivering a message unit to a destination network resource. Kalajan merely discloses protocols, and is not relevant to door access and key management.

Flick, Dunhame, Yulkowski, and Kalajan cannot add any teaching to Martin to render claims 1, 20, and 25 and their dependent claims unpatentable.


It is respectfully submitted that claims 1 and 4-47 are patentable in view of the cited references. Applicant respectfully requests the Examiner to withdraw the rejections.

In view of the above amendments and remarks and having dealt with all the objections raised by the Examiner, reconsideration and allowance of the application is courteously requested.

If there are any further fees required by this communication, please charge such fees to our Deposit Account No. 16-0820, Order No. 34118.

Respectfully Submitted,

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